



## PATENT ABSTRACTS OF JAPAN

(11) Publication number: 2000332553 A

(43) Date of publication of application: 30.11.00

(51) Int. Cl

**H03G 3/02****H03F 3/217****H03M 7/32**

(21) Application number: 11141908

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(22) Date of filing: 21.05.99

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## (54) ONE-BIT DIGITAL AMPLIFYING DEVICE

## (57) Abstract:

**PROBLEM TO BE SOLVED:** To provide a 1-bit digital amplifying device which can adjust an amplification output by increasing or decreasing an amplitude level by simple constitution for an input 1-bit digital signal even when an applied voltage value for pulse amplification is constant.

**SOLUTION:** This 1-bit digital amplifying device generates a 1-bit quantization output signal S3 by imposing digital sigma modulation by passing an input signal through a digital sigma modulating circuit composed of a differentiator 2, a digital sigma modulation part 3, a pulse amplifier 4, and a feedback circuit FC and imposes pulse amplification on the quantized output signal S3. A 1-bit digital signal S0 is inputted as the input signal. An amplitude level variation part 12 which varies the amplitude level of the 1-bit digital signal S0 is provided before the pulse amplification.

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